tenable. "I cannot believe," says Sir John, "that it (the *avicularium*) is connected with the hydra, from finding it seated and active on the side of those cells wherein there are none. Nevertheless, it is an integral part of the zoophyte, in so far as being generated along with new or reproducing portions. This, indeed, does not exclude the character of a parasite; for I have understood that those infesting the larger animals sometimes occur in the fœtus." (p. 245.)

Valkeria imbricata is well-figured on plate 50; *V. cuscuta* on plate 51, and on the same plate *V. spinosa* in a less satisfactory and less complete manner.

Sir John is of opinion that the genus *Serialaria* is unnecessary, and he places its only species in the genus *Valkeria*. It forms the subject of plate 52. The cells are not ranged in a straight line in single series as usually described, but "in partial alternation, the convex side of one being applied to the opposite recess formed by the union of two, somewhat like the position of two rows of cells in a honeycomb." (p. 250.) Like all *Valkeriæ*, the polype has eight tentacula.

Bowerbankia repens and *B. densa* are figured in plate 53, and the species are described in the text. But beyond furnishing us with a series of interesting figures and authentic and original descriptions, we do not find that our author has added any novelty to our knowledge of ascidian zoophytes, beyond some additions to their external anatomy and some corrections of less careful observers.

And now we bid a farewell—we trust a short one—to our author, whose book has engrossed very pleasantly some days of our leisure. We learn that his portefeuille contains many similar memoirs to those herein published, and we could wish to have the influence of hastening also their publication; but surely such influence, if possessed, is unnecessary, for in the honourable fame this volume has secured for Sir John Graham Dalyell there is enough to urge him on to the completion of his ever-during monument.

PROCEEDINGS OF LEARNED SOCIETIES.

BOTANICAL SOCIETY OF EDINBURGH.

Feb. 10, 1848.—The Rev. Dr. Fleming, President, in the Chair.

The following communication was read:—

"An Account of a Botanical Excursion to Braemar, Clova, and Ben Lawers, with his pupils, in August 1847," by Professor Balfour. Having made some general observations on the botany of the alpine districts of Scotland, Dr. Balfour proceeded to give a detailed account of the localities visited and the plants gathered. From Aberdeen the party went to Ballater, thence by Lochnagar to Castleton of Braemar, where they remained ten days, examining Ben Aven, Benna-Muich-Dhui (on the top of which they slept for a night), Cairn Toul, Breriach, Glen Callater, Clova, Glen Isla, &c. Leaving Braemar, they walked by Glen Tilt to Blair Athol, and thence by the Pass of Killiecrankie to Kenmore, Ben Lawers and Loch Lomond. All the usual, and many very rare alpine species were gathered. *Carex*

leporina was picked both on Lochnagar and on Cairn Toul; *Carex vaginata* was found on every hill in the Braemar district; *Woodsia hyperborea* was gathered in Glen Isla, Glen Phee, Clova, and on Ben Lawers; *Luzula arcuata* was seen on all the lofty summits in the vicinity of Ben-na-Muich-Dhui; *Mulgedium alpinum* was detected in considerable quantity on Lochnagar; also a beautiful variety of *Hieracium alpinum* with remarkably long leaves and involucres covered with long white silky hairs: it is *H. alpinum* var. *longifolium* of 'Flora Silesia.' In the vicinity of Ballater, and also in Glen Tilt, *Equisetum umbrosum* grew in profusion. The sides of Loch Etichan and the rocks near Loch Aven were covered with numerous alpine varieties of *Hieracia*, presenting remarkable transition forms: among them were *H. alpinum*, *Halleri*, *nigrescens*, *Lawsoni*, &c. *Orobus niger* was gathered at the Pass of Killiecrankie.

Dr. Balfour then made some remarks on the progress of vegetation in the vicinity of Edinburgh and the injury done by the late frost, in the course of which he stated that *Galanthus nivalis* was in flower in the Botanic Garden, and *Eranthis hyemalis* in Dr. Neill's garden on the 10th inst.

MISCELLANEOUS.

THE COMMON FLEA (PULEX IRRITANS).

Everybody knows that common domestic insect, the flea; but it is not everybody who knows that it undergoes a series of changes as singular as those of the butterfly or beetle; being first a minute egg, then a long slender worm-like larva, then an inactive pupa inclosed within a cocoon spun by the larva; and lastly, the perfect flea itself. My object in this article is to describe these transformations, and to add a practical suggestion for the easy destruction of these little pests.

During the course of the past summer, having dropped a very minute insect on the floor of my library, close to the spot where one of my spaniels is in the habit of lying near my feet, I was obliged, in order to find it, to sweep the carpet very carefully with a fine brush upon a piece of white paper. By doing this I found my specimen; but I also discovered a number of very small, white, worm-like larvæ, which I immediately recognised as those of the common flea. I was not sorry to make this discovery, being anxious to examine the structure of this larva, and especially that of the parts of its mouth (hitherto undescribed), in consequence of the interesting position which the perfect insect occupies in the classification of hexapod insects, forming, as it does, a separate order, to which the name of Aphaniptera has been applied, from no wings being visible upon the insect, although their representatives exist in the shape of two flattened scales on the sides of the body attached to the proper wing-bearing segment.

The female flea deposits about a dozen white, slimy eggs of an oval form (fig. *a*, one of the eggs very highly magnified), and which are of a rather large size in proportion to that of the parent insect. The larvæ are hatched in summer at the end of five or six days. They are at first white, but subsequently assume a slight reddish tinge,